

Third West Weekly Report Shepherd, Michael

1241219 - R8 SDMS

0:

Joyce Ackerman, 'Craig Barnitz (cbamitz@utah.gov)'

07/06/2012 09:11 AM

Hide Details

From: "Shepherd, Michael" < Michael. Shepherd@rockymountainpower.net>

To: Joyce Ackerman/R8/USEPA/US@EPA, "'Craig Bamitz (cbamitz@utah.gov)"' <cbamitz@utah.gov>

7 Attachments











Weekly Reports 06-25 to 06-29-12.pdf Third WestWeekly Log 2012-26.pdf 238936-1.pdf 239030-1.pdf 239099-1.pdf





239101-1.pdf 239253-1.pdf

Joyce & Craig,

Attached are the reports for the week of June 25, 2012.

All air monitoring results came back negative, except for a chrysotile hit on Wednesday last week.

Please let me know if you have any questions.

Thanks,

Mike Shepherd
Project Manager
Rocky Mountain Power - Major Projects
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3RD WEST SUBSTATION REMEDIATION PROJECT **HEALTH SAFETY MANAGER (HSM)**

		DAILY CHECKLIST
DATE:	<u>.</u>	06/25/12
Ger	neral	
		ea Health and Safety Inspection
NA		Review and if necessary update Activity Hazard Analyses (AHA) based on planned site
		activities for the day
Ø		Safety Planning or "Tailgate" mandatory meeting for all employees and contractors price commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
NA		Site hazard and safety instruction for all first time employees, contractors or visitors
NA	•	Complete Employee Meeting Record Form B (where applicable)
NA		Document required Respirator Training completion with Form H
NA		Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
NA		Confirm return of waste material manifest documents for each load with site
		manager.
NA	Compl	te all CSHASP Forms (for applicable activities planned for that day)
	NA	Illness/Injury Report Form A
	NA	Site-Specific Training Record Form C
	NA	Hot Work Permit Form D
	NA	Trench/Evacuation Permit Form E
	NA	Combined Space Entry Permit From F
		Exclusion zone operations are practiced as instructed.
		NA Decontamination unit is working properly.
		NA Workers are using decontamination unit as instructed.
		NA Workers use personal protective equipment properly.
$\overline{\square}$		Set air samples at cardinal compass points around exclusion zone. Check
		hroughout the day to ensure proper operation.
		Observe control measures for dust and fugitive materials i.e. watering excavation
		sites and track out prevention.
		Review sign-in/sign-out log throughout and at the end of the workday. Secure the site at the end of the workday

Sampling

NA So	il Confirmation sampling for any newly excavated areas
NA .	Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusion zone
NA	Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
NA	Digitally photograph each sample location and at any place field sampling personnel determined necessary





		Electronically file photo files into the on-site database
☑		Complete Field Documentation
		Field Sample Data Sheets (FSDS)
	$\overline{\mathbf{A}}$	Logbook
		On-site computer database
		Label each sample media with a unique number
		Seal sample(s) in zip lock plastic bags
\square		Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
☑		Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
☑		Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
\square		Electronically file sample reports into on-site database



Project: 3rd West Sub Station	Date: <u>06/25/12</u>
Location: 3 rd West, 1 st South, SLC	Job Number:
Survey Conducted By: Justin Kargis	Title:

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	Dute
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			х	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			х	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
1926.652 (a)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b)	Employer responsibility to initiate and maintain safety and health programs.			х	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			х	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			х	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.	х			
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			х	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	х			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date Date
1926.451 (a)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			х	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	х			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			х	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	х		c	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.	х			
1926.102 (a) (1)	Eye and face protection shall be provided.	х			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.		=	х	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			Х	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title	Ò			Date
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	х			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.		×	x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.	x	3		
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	х			
1926.556 (b)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.	x			
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			х	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a)	Bi-directional earth moving equipment shall have audible alarms.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			х	5
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			х	

CVE line crew worked on buss and service transformer between bay 2 and switch gear.

CVE electricians on site to work on control cable to the service line.

Newman not on site today.

Weather was hot and dry with afternoon winds and temperatures around 90.





3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

	DAILY CHECKLIST	
DATE:	06/26/12	
_		
General		
	rea Health and Safety Inspection	
NA	Review and if necessary update Activity Hazard Analyses (AHA) based on pla	nned site
	activities for the day	
Ø	Safety Planning or "Tailgate" mandatory meeting for all employees and contract to commencement of any site work. Instruction, review hazards, health & safet and any modifications to the CSHASP	
NA	Site hazard and safety instruction for all first time employees, contractors or vis	sitors
NA	Complete Employee Meeting Record Form B (where applicable)	311013
NA ·	Document required Respirator Training completion with Form H	
NA	Record times and numbers of dump trucks and trailers as they leave the site with	th
	contaminated material.	•••
NA	Confirm return of waste material manifest documents for each load with site manager.	
NA Com	te all CSHASP Forms (for applicable activities planned for that day)	
NA NA	Illness/Injury Report Form A	
NA	Site-Specific Training Record Form C	
NA	Hot Work Permit Form D	
NA	Trench/Evacuation Permit Form E	
NA	Combined Space Entry Permit From F	
	Exclusion zone operations are practiced as instructed.	,
	NA Decontamination unit is working properly.	
•	NA Workers are using decontamination unit as instructed.	•
	NA Workers use personal protective equipment properly.	
$\overline{\checkmark}$	Set air samples at cardinal compass points around exclusion zone. Check	
	throughout the day to ensure proper operation.	
	Observe control measures for dust and fugitive materials i.e. watering excavations and track out prevention.	on
	Review sign-in/sign-out log throughout and at the end of the workday.	
Ø	Secure the site at the end of the workday	
<u>Samplin</u>		
NA Soil	nfirmation sampling for any newly excavated areas	•
NA SOII	Stationary Air Monitoring during contaminated soil removal around the perime exclusion zone	eter of the
NA	Personal Breathing Zone Monitoring on personnel conducting contaminated duremoval	ıst and soil
NA	Digitally photograph each sample location and at any place field sampling pers determined necessary	sonnel





⊻		Electronically file photo files into the on-site database
		Complete Field Documentation
	\square	Field Sample Data Sheets (FSDS)
	\square	Logbook
	\square	On-site computer database
$ \sqrt{} $	•	Label each sample media with a unique number
		Seal sample(s) in zip lock plastic bags
Ø		Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
Ø		Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
☑		Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
☑		Electronically file sample reports into on-site database



Project: 3rd West Sub Station	Date: 06/26/12
Location: 3rd West, 1st South, SLC	Job Number:
Survey Conducted By: _Justin Kargis	Title:

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.		-	x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			х	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	х			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			х	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			х	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	х			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
1926.652 (a)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			х	
1926.20 (b)	Employer responsibility to initiate and maintain safety and health programs.			х	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.	x			
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	х			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			х	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			х	,
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			х	
1926.1053 (b)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	*
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	х			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.	х			
1926.102 (a) (1)	Eye and face protection shall be provided.	х		-	
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	х			
1926.350 (a)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			х	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			Х	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			х	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			х	
1926.451 (a)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.	x			
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			х	
1926.404 (f)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	X			
1926.556 (b)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.	x			
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			х	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			х	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			х	

CVE line crew excavated for grounding. While water was applied while digging, these trenches did not uncover native material.

CVE fabricators on site to work on forming porches for control building and switch gear. They also helped with placement of cable trench to 46 kV yard.

CVE electricians continued working on control cable and lighting.

STR was on site but could not proceed with work on transformers due to lack of parts.

Weather was warm, dry and sunny with afternoon winds and temperatures in the mid 80's.





3RD WEST SUBSTATION REMEDIATION PROJECT HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

	DAILY CHECKLIST
ATE:	06/27/12
<u>General</u>	
	rea Health and Safety Inspection
NA	Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
Ø	Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prio to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
NA NA	Site hazard and safety instruction for all first time employees, contractors or visitors Complete Employee Meeting Record Form B (where applicable)
NA	Document required Respirator Training completion with Form H
I A	Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
I A	Confirm return of waste material manifest documents for each load with site
	manager.
IA Compl	ete all CSHASP Forms (for applicable activities planned for that day)
NA .	Illness/Injury Report Form A
NA	Site-Specific Training Record Form C
NA	Hot Work Permit Form D
NA	Trench/Evacuation Permit Form E
NA	Combined Space Entry Permit From F
	Exclusion zone operations are practiced as instructed.
	NA Decontamination unit is working properly.
	NA Workers are using decontamination unit as instructed.
	NA Workers use personal protective equipment properly.
Ø	Set air samples at cardinal compass points around exclusion zone. Check
	throughout the day to ensure proper operation.
	Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
a	Review sign-in/sign-out log throughout and at the end of the workday. Secure the site at the end of the workday
C1:	Secure the site at the cliu of the workday

Sampling

NA	Soil Confirmation sampling for any newly excavated areas
NA	Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusion zone
NA	Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
NA	Digitally photograph each sample location and at any place field sampling personnel determined necessary





Ø	•	Electronically file photo files into the on-site database
Ø		Complete Field Documentation
	$\overline{\mathbf{A}}$	Field Sample Data Sheets (FSDS)
	\square	Logbook
	\square	On-site computer database
\square		Label each sample media with a unique number
\square		Seal sample(s) in zip lock plastic bags
Ø		Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
Ø		Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
		Review and disseminate sample results as received from the laboratories to Project
		Manager and other appropriate managers and employees
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Project: 3rd West Sub Station	Date: <u>06/27/12</u>
Location: 3rd West, 1st South, SLC	Job Number:
Survey Conducted By: Justin Kargis	Title:

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	*
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.		V	x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	х			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			х	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.652 (a)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			х	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			х	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.		8	х	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			X	,
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.	x			
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
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Standard	Title				Date
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1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.		8	x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	х			n
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			х	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.	-		x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.	9 1		х	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.	x			
1926.102 (a) (1)	Eye and face protection shall be provided.	х			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			х	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x		8	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			х	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.	x			
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			х	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x	G.		
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.	x			*
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			х	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			X	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			

f

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.	-		x	
1926.550 (b)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			х	

CVE line crew continued excavations for grounding and did not uncover native material out to the north west gate. They began installing grounding cable.

CVE fabricators continued with forming for porches.

CVE electricians continued working on controls and punch list items.

Weather was hot and dry with moderate winds and temperatures in the low 90's.





3^{RD} West Substation Remediation Project

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

		DAIL I CHECKLIST
DATE:	06/28	<u>/12 </u>
General		
	_	ealth and Safety Inspection
ŇA		www and if necessary update Activity Hazard Analyses (AHA) based on planned site
1171		ties for the day
Ø	Safety to cor	y Planning or "Tailgate" mandatory meeting for all employees and contractors prior mmencement of any site work. Instruction, review hazards, health & safety issues my modifications to the CSHASP
NA		azard and safety instruction for all first time employees, contractors or visitors
NA		plete Employee Meeting Record Form B (where applicable)
NA		ment required Respirator Training completion with Form H
ŊA	Reco	rd times and numbers of dump trucks and trailers as they leave the site with minated material.
NA .		rm return of waste material manifest documents for each load with site
	mana	
NA Com		CSHASP Forms (for applicable activities planned for that day)
NA	•	Illness/Injury Report Form A
NA		Site-Specific Training Record Form C
NA		Hot Work Permit Form D
NA		Trench/Evacuation Permit Form E
· NA		Combined Space Entry Permit From F
		Exclusion zone operations are practiced as instructed.
	NA	Decontamination unit is working properly.
	NA	Workers are using decontamination unit as instructed.
	NA	Workers use personal protective equipment properly.
\square		r samples at cardinal compass points around exclusion zone. Check ghout the day to ensure proper operation.
		rve control measures for dust and fugitive materials i.e. watering excavation and track out prevention.
I	Revie	ew sign-in/sign-out log throughout and at the end of the workday. e the site at the end of the workday
Samplir	ng	·
NA Soil NA	Statio	nation sampling for any newly excavated areas onary Air Monitoring during contaminated soil removal around the perimeter of the sion zone
NA		onal Breathing Zone Monitoring on personnel conducting contaminated dust and soil

Digitally photograph each sample location and at any place field sampling personnel

determined necessary





V	Electronically file photo files into the on-site database
Ø	Complete Field Documentation
	Field Sample Data Sheets (FSDS)
	Logbook
-	On-site computer database
abla	Label each sample media with a unique number
	Seal sample(s) in zip lock plastic bags
Ø	Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
7	Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
Ø	Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
Ø	Electronically file sample reports into on-site database



Project: 3rd West Sub Station	Date: 06/28/12
Location: 3rd West, 1st South, SLC	Job Number:
Survey Conducted By: _Justin Kargis	Title:

Standard	Title	In Compliance	Out of Compliance	D N/A	Corrective Action Taken and
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	Dute
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			х	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	х			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.		is it	х	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			х	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			х	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			х	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.	х			
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	х			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926,451 (a) (4)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			х	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	х			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.	х			
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			х	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			Х	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			х	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.	x			
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.		ā:	х	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.	x			
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			х	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			х	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.	×		х	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	* * * * * * * * * * * * * * * * * * *

CVE line crew continued finished setting grounding cables and buried most of the trenches. They dug small holes in the UTA yard and found native, potentially contaminated material just under the yard rock. They also continued working on capacitor bank assembly.

CVE fabricators poured porches at control building and switch gear.

CVE electricians onsite to work on control connections.

Weather was hot and dry with afternoon winds and temperatures in the high 90's.





3RD WEST SUBSTATION REMEDIATION PROJECT **HEALTH SAFETY MANAGER (HSM)**

DAILY CHECKLIST

	DAIL I CHECKLIST
DATE:_	06/29/12
<u>Gene</u>	
	ork area Health and Safety Inspection
NA	Review and if necessary update Activity Hazard Analyses (AHA) based on planned site
	activities for the day
\square	Safety Planning or "Tailgate" mandatory meeting for all employees and contractors price
	to commencement of any site work. Instruction, review hazards, health & safety issues
	and any modifications to the CSHASP
NA	Site hazard and safety instruction for all first time employees, contractors or visitors
NA	Complete Employee Meeting Record Form B (where applicable)
NA	Document required Respirator Training completion with Form H
NA	Record times and numbers of dump trucks and trailers as they leave the site with
	contaminated material.
NA	Confirm return of waste material manifest documents for each load with site
	manager.
	omplete all CSHASP Forms (for applicable activities planned for that day)
	A Illness/Injury Report Form A
	A Site-Specific Training Record Form C
	A Hot Work Permit Form D
	A Trench/Evacuation Permit Form E
N	A Combined Space Entry Permit From F
	Exclusion zone operations are practiced as instructed.
	NA Decontamination unit is working properly.
	NA Workers are using decontamination unit as instructed.
	NA Workers use personal protective equipment properly.
	Set air samples at cardinal compass points around exclusion zone. Check
	throughout the day to ensure proper operation.
	Observe control measures for dust and fugitive materials i.e. watering excavation
	sites and track out prevention.
\square	Review sign-in/sign-out log throughout and at the end of the workday.
	Secure the site at the end of the workday
Sami	nling .

Sampling

NA	Soil Confirmation sampling for any newly excavated areas
NA	Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusion zone
NA	Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
NA	Digitally photograph each sample location and at any place field sampling personnel determined necessary





Electronically file photo files into the on-site database
Complete Field Documentation
Field Sample Data Sheets (FSDS)
Logbook
On-site computer database
Label each sample media with a unique number
Seal sample(s) in zip lock plastic bags
Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
Review and disseminate sample results as received from the laboratories to Project
Manager and other appropriate managers and employees
Electronically file sample reports into on-site database



Project: 3rd West Sub Station	Date: <u>06/29/12</u>
Location: 3rd West, 1st South, SLC	Job Number:
Survey Conducted By: Justin Kargis	Title:

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			х	v
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			х	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			х	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			х	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			х	
1926.20 (b)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			х	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.	х			
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			X	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	х	2		

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (4)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			х	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	х			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			х	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x	EX.		2
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.	x			
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			х	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	

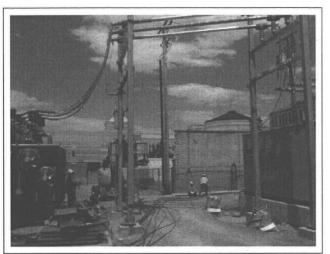
		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date Date
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.		,1	х	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.	x			,
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.	x			
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			х	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			х	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title				Date
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			х	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			х	

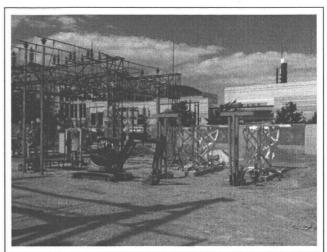
CVE line crew on site to provide electrically qualified person. He worked on service transformer at bay 2. CVE fabricators pulled forms from porches at control building and switch gear.

RMP relay technicians on site doing work in switch gear. They stayed on site after other contractors left for the day.

Weather was hot, sunny and calm with mid day temperatures near 90.



РНОТО 1



РНОТО 2

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070 (801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY: DCR	
DRAWN BY: JMK	DATE 06/25/12	FILE:	

SITE PHOTOGRAPHS

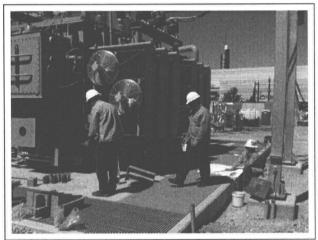




РНОТО 1



РНОТО 2



РНОТО 3



РНОТО 4

R & REnvironmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

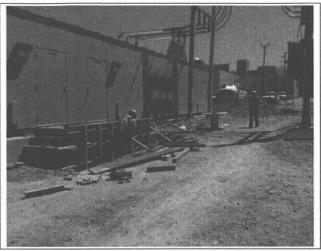
DRAWN BY: DATE		REVIEWED BY: DCR	
DRAWN BY: JMK	DATE 06/26/12	FILE:	

SITE PHOTOGRAPHS





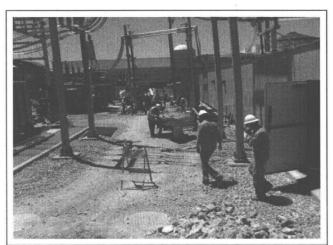
РНОТО 1



РНОТО 2



РНОТО 3



РНОТО 4

R & REnvironmental, Inc.
47 West 9000 South, Suite #2, Sandy, Utah 84070 (801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY: DCR
DRAWN BY: JMK	DATE 06/27/12	FILE:

SITE PHOTOGRAPHS



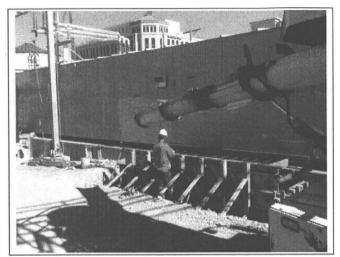
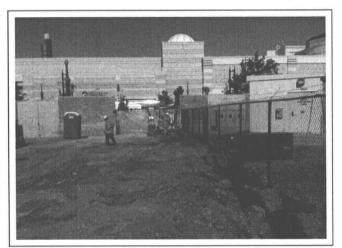


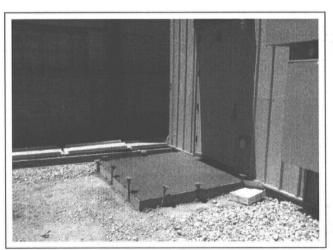
PHOTO 1



РНОТО 2



РНОТО 3



РНОТО 4

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070 (801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY: DCR	
DRAWN BY: JMK	DATE 06/28/12	FILE:	

SITE PHOTOGRAPHS



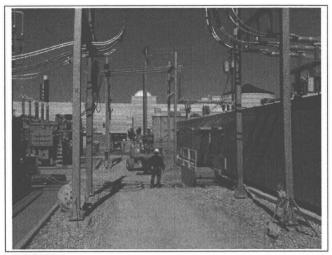
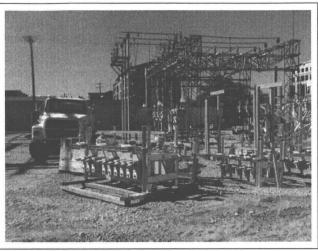


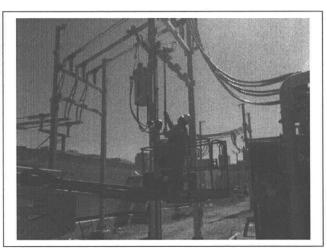
PHOTO 1



РНОТО 2



РНОТО 3



РНОТО 4

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:	SCALE:	REVIEWED BY: DCR	
DRAWN BY: JMK	DATE 06/29/12	FILE:	

SITE PHOTOGRAPHS



PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME:		Third West Sub	DATE:	Mon	Monday, June 25, 2012					
PO & Work Order NO. :		3000078050 / 1	10035803	MAIN CONTI	RACTOR :	Cache Valle	y Electric			
Crew Start Time:	6:5	55	Crew Stop Time:	17:15	;	Tot Hrs mns:	10:20			
FCR Start Time:	6:4		FCR Stop Time:	17:22	•	Tot Hrs mns:	10:39			
Use military time format 00:0			TOR Grop Time.	17.22	•	1007113111113.	10.00			
Use miniary time ronnat out										
WEATHER CONDITIONS	: 		Sunny - 74 degre	ees in AM , 100 d	degrees in	PM				
DESCRIPTION: (work per R&R set up four monitors. CV										
electricians with pulling in the Electrician Crew pulled cables Wilding test the southeast roa Electrical Crew = 3, Newman	for yard li dway whic	ighting and station ch passed f or com	service, also control ca	ble to CBs 46 and	47. N ewma	an is not on site	today.			
						: 				
IF WORKING IN ENERGIZ	ED SUB	STATION:				·	<u> </u>			
Dispatcher login, name and tir		Jim Bowman 0643								
Dispatcher logout, name and	time:	Al Swinski 1722					<u></u>			
DISCREPANCIES:				IMMEDIATE CO						
Existing conduits from cable trend need new 3" sealtight running from			2". 3" is required. Also,	Discussed with Rog		d Mike Shepherd.				
					**					
		· - - 7-								
DELAYS OR LOST TIME	ENCOUN	NTERED:	•							
							:			
EQUIDATE LET	-13	1-tteV				•				
EQUIPMENT (working, de CVE Line Crew: Portable toilet (trachoe (1), bobcat, mini-ex, water	2), forklift,	1 dumpster, office tra	ailer, conex , exclusion zon	e conex (2), tool trail	ler, Pickup, J	ILG (1), tool trailer	Newman:			
OSHA Recordable Safety	Incident	te.			Reported	bv:	Time:			
Cond Recordable Calety	moraeri	<u>~·</u>				-7-				

Rocky Mountain Power

Russ Johnson

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log PROJECT NAME: Third Wiest Sub - Rebuild Tuesday, June 26, 2012 PO & Work Order NO.: 3000078050 / 10035803 MAIN CONTRACTOR: Cache Valley Electric Crew Start Time: Crew Stop Time: 17:15 Tot Hrs mns: FCR Start Time: 6:39 FCR Stop Time: 17:25 Tot Hrs mns: 10:46 Use military time format 00:00 **WEATHER CONDITIONS:** Sunny - 78 degrees in AM, 91 degrees in PM DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.) R&R set up four monitors. CVE Line Crew installed grounds on the switchgear buswork to Xfmr. #2 and installed grounding in the west and north 46 kV yard. CVE Fab Crew mobed to the site and started tying rebar and forms for the center switchgear porch and the north porch of the control building. They also worked on the cable trench from the new truck crossing that ties into the exisiting cable trench in the 46 kV yard and uncovered the manholes for vaults #7 and #8 to provide access for the RMP UG crew. CVE Electrician Crew pulled cables for yard lighting and removed the temporary station service cables. Newman is not on site today. Wilding was on site for a while witnessing tying of rebar and form placement. STR arrived at site around 9:00 and un-crated the materials sent by Hyundai. Dragos recognized that the shipment did not include any of the assembly bolts or U-bolts required to put the seismic bracing together. STR left the site around 3:30 after realizing that the necessary materials had not been shipped and wouldn't be available for a few days. CVE Une Crew = 6. CVE Fab Crew = 5. CVE Electrical Crew = 3, Newman = 0, STR = 4, R&R = 1, Wilding = 1. IF WORKING IN ENERGIZED SUBSTATION: Dispatcher login, name and time: Bob Gentry 0639 Dispatcher logout, name and time: Al Swinski 1720 DISCREPANCIES: IMMEDIATE CORRECTIVE ACTION TAKEN: DELAYS OR LOST TIME ENCOUNTERED: EQUIPMENT (working, delivered, idle):

CVE Line Crew: Portable toilet (2), forklift, 1 dumpster, office trailer, conex, exclusion zone conex (2), tool trailer, Pickup, JLG (1), tool trailer. Newman:

Rocky Mountain Power

OSHA Recordable Safety Incidents:

trachoe (1), bobcat, mini-ex, Water truck, compactor, backhoe.

Russ Johnson

Field Construction Representative

Reported by:

Time:

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME:		Third West Sub - Rebuild			DATE: Wednesday, June 27, 2012							
PO & Work Order NO. :_		300007805	0 / 100	35803	MAIN CONT	RACTOR:	Cache Valle	y Electric				
Crew Start Time:	. 6	6:55 Crew Stop Time:			17:50)	Tot Hrs mns:	10:55				
FCR Start Time:		5:41		FCR Stop Time:	17:5	5	Tot Hrs mns:	11:14				
Use military time format 00		<u> </u>		•	٧.		•	• • • • • • • • • • • • • • • • • • • •				
WEATHER CONDITIONS	S :	 		Sunny - 58 degre	ees in AM , 88 o	deg r ees in	PM	·				
DESCRIPTION: (work pe												
R&R set up four monitors. C sides of the UTA common fer CVE Fab Crew tied rebar and Electrician Crew landed cable Xfmr #2. Nevman is not on s W lding = 1.	nce are p d set form es for yar	art of the ground as for the center d lighting and in	ding cha and we stalled	ange order. CVE Line est porches on the sw the final yard light on	e Crew installed of itchgear and both the east column	grounding in n porches for of the struct	the north 46 kV r the control buil ure on the north	yard (CO). ding. CVE side of				
		•										
				•								
								ľ				
-												
IS WORKING IN ENERGY	7ED 011	DOTATION:		 								
IF WORKING IN ENERGI Dispatcher login, name and t			44			· ·						
Dispatcher logout, name and		Bob Gentry 06 Al Swinski 175										
DISCREPANCIES:	tino.	IA OWIIISKI 175			IMMEDIATE C	ORRECTIV	/E ACTION TA	KEN:				
				ļ								
								· -				
			-									
	-											
								ļ				
DELAYS OR LOST TIME	ENCOL	INTERED:										
					•							
		-					·					
EQUIPMENT (working, controlled to let			ice trailer	coney exclusion zone	e conex (2) tool tra	iler Pickup	II G (1) tool trailer	Newman				
trachoe (1), bobcat, mini-ex , wa				, conon , cholubion zone	, 55110A (2), 1001 IIa	, rionup, e	(1), tool tidlicl	Morringii.				
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OSHA Recordable Safet	y Incide	nts:			· —	Reported	by:	Time:				
						<u> </u>	•					
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Rocky Mountain Power

Russ Johnson

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log PROJECT NAME: Third West Sub - Rebuild DATE: Thursday, June 28, 2011 3000078050 / 10035803 PO & Work Order NO.: MAIN CONTRACTOR: Cache Valley Electric Crew Stop Time: ___ Crew Start Time: 6:55 17:00 Tot Hrs mns: FCR Start Time: 17:10 FCR Stop Time: Tot Hrs mns: 10:24 Use military time format 00:00 Sunny - 71 degrees in AM, degrees in PM **WEATHER CONDITIONS:** DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.) R&R set up four monitors. CVE Line Crew installed backfilled grounding in the north 46 kV yard (CO) and set up to set capacitor bank racks on the structures, but crew was called out on an fire emergency in Southern Utah. CVE Fab Crew completed forming up the porches and poured 18 cyds at 9:30, including the west and middle porches on the switchgear and the two porches on the control building. They finished the steps, cleaned up the area and left the site around 2:30. CVE Electrician Crew pulled the last of the control cables for the 46 kv breakers into the breaker cabinets and completed some wiring in the yard light junction boxes. Newman is not on site today. CVE Line Crew = 6, CVE Fab Crew = 5, CVE Electrical Crew = 3, Newman = 0, R&R = 1, W Iding = 1. IF WORKING IN ENERGIZED SUBSTATION: Dispatcher login, name and time: Bob Gentry - 0646 Dispatcher logout, name and time: DISCREPANCIES: IMMEDIATE CORRECTIVE ACTION TAKEN: DELAYS OR LOST TIME ENCOUNTERED: EQUIPMENT (working, delivered, idle): CVE Line Crew: Portable toilet (2), forklift, 1 dumpster, office trailer, conex, exclusion zone conex (2), tool trailer, Pickup, JLG (1), tool trailer. Newman:

Rocky Mountain Power

OSHA Recordable Safety Incidents:

trachoe (1), bobcat, mini-ex, Water truck, compactor, backhoe.

Russ Johnson

Field Construction Representative

Reported by:

Time:

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME:	Third West	Sub - Rebuild	DATE: Frid)12	
PO & Work Order NO. :	300007805	50 / 10035803	MAIN CONTRACTOR	: Cache Valle	/ Electric
Crew Start Time:	6:55	Crew Stop Time:	11:15	Tot Hrs mns:	4:20
FCR Start Time:	6:36	FCR Stop Time:	12:12	Tot Hrs mns:	5:36
Use military time format 00:00			12.12		0.00
ose nimary unic ronnat 60.00					
WEATHER CONDITIONS:		Sunny - 73 degree	s in AM, 86 degrees at 1	1:30	
DESCRIPTION: (work perfo					
R&R set up four monitors. RMF Xfmr #2 and then had to swap th porches, installed canopies on th to Ft. Douglas around 10:00. C\ Crew = 5, CVE Electrical Crew	ne jumpers to match p ne switchgear (excep VE Electrician Crew is	phasing up with the SS on Xfm t for the east porch which has s not on site today. N ewman is	r#1. CVE Fab Crew stripper's tripper's tripper	ed forms from the	e four ey mobed
IF WORKING IN ENERGIZE	D SUBSTATION:			<u> </u>	
Dispatcher login, name and time		7646			
Dispatcher logout, name and time					
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DELAYS OR LOST TIME EN	COUNTERED:				
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EQUIPMENT (working, deli	vored Idle):	•	<u> </u>		
CVE Line Crew: Portable toilet (2),		ice trailer conex exclusion zone	conex (2) tool trailer Pickun	II G (1) tool trailer	Newman:
trachoe (1), bobcat, mini-ex, water				,20 (1), 1001 1141101.	TTOWN.
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OSUA Becordable Cafe in			D	hara	
OSHA Recordable Safety In	icidents:		Reported	υy.	Time:
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Rocky Mountain Power

Russ Johnson Field Construction Representative



June 28, 2012

Laboratory Code:

RES

Subcontract Number: Laboratory Report:

NA

Project # / P.O. #

RES 238936-1 None Given

Project Description:

3rd West Sub - RMP

David Roskelley R-& R Environmental 47 West 9000 South #2 Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 238936-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer

President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:

RES 238936-1

Client:

R & R Environmental

Client Project Number / P.O.:

None Given

Client Project Description: Date Samples Received:

3rd West Sub - RMP

June 27, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

June 28, 2012

Client	Lab		Area	Air	Air Number of		Asbestos	Filter
ID Number	ID N	umber	Analyzed	Volume Sampled	Asbestos Structures Detected	Sensitivity	Concentration	Loading
			(mm²)	(L)	Detected	(s/cc)	(s/cc)	(s/mm²)
3W-082512 E	EM	888960	NA	947	NA	•	Rejected due to	Blown Filter
3W-062512 N	EM	888961	0.0900	947	ND	0.0045	BAS	BAS
3W-062512 W	. EM	8889 62	0.0900	947	. ND	0.0045	BAS	BAS
3W-062512 S	EM	8889 63	NA	947	NA		Rejected due to	Blown Filter
NA = Not Analyzed ND = None Detected BAS = Below Analytica Average Grid Opening		0.010	Filter Diame	al = Mixed C e ter = 25 mm er Area = 385			Oppinly support by Dates to Chi + States Chi - Chi + States Chi - Chi +	
							DATA QA	

Due Date: 6-272 Due Time: 340-



RES 238936

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7-185

Pager: 303-509-5098

		INVOICE T	O: (IF DI	FFER	ENT)								CO	NTAC	T IN	FOR	MATIO	N:			
Compeny: RIR Environmental		Company:					Contact:	lave	Roy	icell	br .					Conta	ct				
Address: 47 W 9800 5 #2		Address:					Phono:									Phorw	r.				
Sandy W. 84070							8)(:									FaX:					
		<u> </u>					Cell/page	er: 80 sta Daliva:	((-u	<u> 35°</u>					Col/pa	ager:				
Project Number and/or P.Q. #:		· · · · · · · · · · · · · · · · · · ·																			
Project Description/Location 312 West S	oub-RMP						<u> </u>	we @	M	mi c	<u>۵.ره</u>	<u> </u>									
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Fume Scan / TCLP —	RUSH 5 day10 day	required for RUSH tumarounds.**	' <u> </u>	¥	8		5	11	2ੂ			預	ũ		¥) = Other				
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E.coll O157:H7, Coliforms, S.auraus	24 hr2 Day		<u>\$</u>	. g	SO-Indir		Welding Fume,		b	Intrification	¥ 3	5									
Salmonella, Listeria, E.coli, APC, Y & M			5	: ≃	-	월	E	11.	7	[뚩]공	몽	5 8	5								
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Attachment I

Key to Count Sheets Count Sheets Anaiyticai Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

Structure Types

A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

ND = no structures detected

M = other structure associated with a matrix

NAM = Non Asbestos Mineral

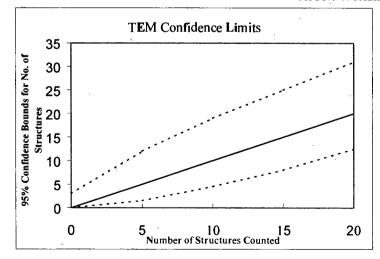
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr Nathan DelHierro Angela Heitger Jonathan Bernard Paul D. LoScalzo Mark Steiner Norberto Zimbleman Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI_
Instrument	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	20KX) 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 Mm
Primary filter area (mın2)	385
Secondary Filter Area (mni2)	
GA Tyoa	

RAR
A
947
6/27/12
238436
888960

	_
Analyzed by	JB
Analysis date	6/28/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):					
Fraction of prtmary filter used					
Total Resuspension Volume (ml)					
Volume Applied to secondary filler (ml)					

Grid	Grid Opening	Structure	No. of Structures		Oimensions		Identification	Mineral Class				1 = y	es, blank	= no
Crid	One opening	Туре	Primary	Total	Length	Width	·	Amphibole		NAM	Sketch/Comments	Sketch	Photo	EDS
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Reservoirs Environmental, Inc. TEM Asbestos Structure Count

88896

	I LIVE ASDESIOS SITUE	JUNE CC
REI	Cllent:	(
OL 100 CX N (S)	Sample Type (A=Air, D=Dust):	
100 KV	Air volume (L) or dust area (cm2)	0
(20KX) 10KX	Date received by lab	4
0.01	Lab Job Number:	2
0.28 um	Lab Sample Number:	5
0.056 um	F-Factor Calculation (Indirect Preps	Only):
385	Fraction of primary filter used	<u> </u>
	Total Resuspension Volume (ml)	

Volume Applied to secondaty filter (mi)

Analyzed by	JB
Analysis date	6/28/12
Method (D=Oirect, I=Indirect, IA=Indirect, ashed)	D
Counting mies (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture	No. of St	nctures	Dimer	nsions	Identification	Mineral Class				1 = ye	es, blank	= no
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	F31	M												
	E3-1	M								j				

Laboratory name:

Instrument

Voltage (KV)

Magnification

Scale: 1L =

Scale: 1D =

(mm2)

QA Type

Grid opening area (mm2)

Primary filter area (mm2)

Secondary Filter Area

JEOL 100 CX

Reservoirs Environmental, (nc
TEM Asbestos Structure Count

Laboratory name:	REI
instrument	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	20KX) 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.0 5 6 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Tyoe	

RAR
A
947
6/27/12
238936
888962

F-Factor Calculation (Indirect Preps C	Only):
Fraction of primary filter used	
Total Resuspension Voluma (ml)	
Volume Applied to secondary (litter (mi)	

Analyzed by	JB:			
Analysis date	6/28/12			
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D			
Counting rules (ISO, AHERA, ASTM)	AH			
Grid storage location	Month Analyzed			
Scope Alignment	Date Analyzed			

Grld	Grid Opening	Strcture	No. of Str	uctures	Dime	nsions	Identification	Mineral Cless				1 = y	es, blank	= no
Ond .	Ond Opening	Туре	Primary	Total	Length	Width	Identineation	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS
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	F4-4	ND.				Pago	A	70% in h	mt	5%	Jebus			
	E4-4	ND				2,0	13/	Downt.	enf	5%	belons			
	C4-4	ND				'								
	E4-6	MD						13	6/28	12				
3	14-3	ND			·			- / /	/ /		·			
	44-3	2												
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	643	5												

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.05S um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Tyoe	

Rak
A
947
6/27/12
238936
888963

Volume Applied to secondary filter (ml)

Lab Job Number:	238936	· <u>g</u>
Lab Sample Number:	888963	s
F-Factor Calculation (Indirect Pre	ps Only):	
Fraction of primary filter used		
Total Resuspension Volume (ml)		

Analyzed by	JB:
Analysis date	6/28/12
Method (D=Direct, l=Indirect, IA=Indirect, ashed)	D
Counting mles (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Afignment	Date Analyzed

\lceil	Grid	Grid Opening	Strncture	No. of Str	nctures	ures Dimenslens		Dimensiens Identification Mineral Class		Mineral Class		Jentification Mineral Class			1 = yes, blank = no		
	Onu	Cha Opening	Туре	Primary	Total	Length	₩idth	identined to i	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS		
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Analytical Procedures - AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confinnation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5

micron with an aspect ratio of 5:1 or greater with substantially parallel

sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement,

with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are

intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or

hidden by a particulate. The exposed fiber end must meet the fiber

definition given above.

1f more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Eauations Used for Calculations

· Area Analyzed, mm² = # GO counted x Average GO Area (mm)

Concentration, s/cc = $\frac{\text{\# Asbestos Structures}}{\text{\# GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2)}{\text{Average GO area (mm}^2)} \times \frac{1L}{1000\text{cc}}$

Filter loading, s/mm² = # Asbestos structures Area Analyzed (mm²)

GO = TEM grid opening



June 29, 2012

Laboratory Code:

RES

Subcontract Number:

NA

Laboratory Report: Project # / P.O. #

RES 239030-1 None Given

Project Description:

3rd West Sub - RMP

David Roskelley R & R Environmental 47 West 9000 South #2 Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 239030-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer

President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:

RES 239030-1

Client:

R & R Environmental

Client Project Number / P.O.:

None Given

Client Project Description: Date Samples Received:

3rd West Sub - RMP

June 28, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

	^^	0040
June	ZY,	2012

Client	Lab		Area	Air-	Number of	Analytical	Asbestos	Filter	
ID Number	ID N	umber	Sampled Structure		Asbestos Structures Detected	Sensitivity	Concentration	Loading	
			(mm²)	(L)		(s/cc)	(s/cc)	(s/mm²)	
3W-062612 E	EM	889256	0.1000	641	ND	0.0060	BAS	BAS	
3W-062612 N	EM	889257	0.0800	963	ND	0.0050	BAS	BAS	
3W-062612 W	EM	889258	0.0800	966	ND	0.0050	BAS	BAS	
3W-062612 S	EM	889259	0.0800	966	ND	0.0050	BAS	BAS	

NA = Not Analyzed

Filter Material = Mixed Cellulose Ester

ND = None Detected

Filter Diameter = 25 mm

BAS = Below Analytical Sensitivity Average Grid Opening in mm² = 0.010 Effective Filter Area = 385 sq mm

Due Date:_	62912
Due Time:	9-

Contact

Phone Email Fax

Reilas Reservoirs Environmental, inc. 5801 Logan St. Denver, CO 80216 • Ph; 303 884-1088 • Fax 303-477-4279 • Tot Free :866 RESI-ENV

Page _ 1

Pager: 303-509-2098 INVOICE TO: (IF DIFFERENT) **CONTACT INFORMATION:** Contract: Dail Roskeller Company company: RER Environmenta Address 47 W 98005 #12 Fax bunds Ut. 84070 Celt/page Cell/pagor: 801 SH(-1035 Project Number and/or P.O. #: Project Doscription/Location: 33 West Sub - RALP duel@ rreniro.com ASBESTOS LABORATORY HOURS: Weakdays: 7am - 7pm REQUESTED ANALYSIS **VALID MATRIX CODES** LAB NOTES: PLM / PCM /(TEN) RUSH (Same Day) PRIORITY (Next Day) STANDARD Air = A Bulk = B (Rush PCM = 2hr, TEM = Chr.) Dust = 0 Paint = P CHEMISTRY LABORATORY HOURS: Weekdays: 8am - Spm Soil = S Wipe = W RUSH ___ 24 hr. ___3-5 Day Swab = SW Metal(9) / Dust F = Food Owart "Prior notifit ation is RCRA S / Metals & Welding Drinking Water = DW Waste Water = WW RUSH ___ 5 day ___10 day required for RUSH Fume Scan / TCLP O = Other turnarounds.** ₹ ga Organics 24 hr. 3 day 5 Day **ASTM E1792 approved wipe media only** õ MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm Level II, 7402, I ro-vac, ISO-Indin E.coll 0157:H7, Coliforms, S.aureus 24 hr. 2 Day 48 Hr. ___3-5 Day Salmonella, Listeria, E.coli, APC, Y & M Mold RIJSH 24 Hr 48 Hr __ 3 Day __ S Day **Turnaround times establish a faboratory priority, subject to laboratory volums and are not guaranteed. Additional fee apply for afterhours, weakends and holidays.** Matrix Code Special Instructions: EM Number (Laboratory Date Time Use Only) Collected Collected Client sample ID number (Sample ID's must be unique) mm/dd/yy hh/mm a/p 3W-062612F 6(zdi 5522Sc 22 966 58 3W-062UZ W 6 7 8 9 10 Number of samples received: (Additional samples shall be listed on attached long form.) on received and wit not be responsible for atrixe or envissions in calculations resulting from the inaccuracy of original data. By signing classiformpany representative agrees that aubmission of the following samples for requested analytical services agreement with payment tenns of NET 30 days, latture to comply with payment terms may result in a 1.5% monthly interest truckings. NOTE: RE! will analyze incoming samples base oon information analysis as indicated on this Chain of Custody shall constit Date/Time: Relinguished By: Sample Condition: On Ice Sealed intact Laboratory Use Only Yes / No Yas Y No Temp. (F°) Yes / No CO20 Searrier: Received By Data Time: Results: Pone Email Fax Initials Contact Phone Email Fax Contact Date Time Date Time tnitials

> Initials 3533 7-2011 version 1

Contact

Phone Email Fax

Date

Time

initiais

Tims

Date

Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

Structure Types

Α	=	Amosite	F =	Fiber
An	=	Anthophyllite	B =	Bundle
		Chrysotiie	C =	Cluster
Cr	=	Crocidolite	M =	Matrix
Т	_	Tramolita		

ND = no structures detected

M = other structure associated with a matrix

NAM = Non Asbestos Mineral

XGB = partly obscured by a grid bar

Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron

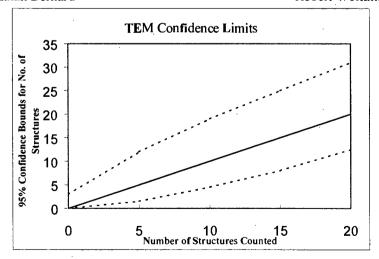
1.80 length units = 0.5 micron

18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr Nathan DelHierro Angela Heitger Jonathan Bernard Paul D. LoScalzo Mark Steiner Norberto Zimbleman Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N(S)
Voltage (KV)	100 KV
Maanification	EOFX 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client:	Rea.
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	641
Date received by lab	6/29/12
Lab Job Number:	239030
Lab Sample Number:	889256

Analyzed by	AH
Analysis date	6/29/12
Method (D=Dlrect, I=Indirect, IA=Indirect, ashed)	D .
Counting rules (ISO, AHERA, ASTM)	Alon
Grid storage location	Month Analyzed
Scope Alignment	Dale Analyzed

F-Factor Calculation (Indirect Preps Only):				
Fraction of primary filter used				
Total Resuspension Volume (ml)				
Volume Applied to secondary filter (ml)				

Grid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Idenlification	Mineral Class				1 ≈ y	es, blank	= no
Cita	Ond Opening	Туре	Primary	Total	Length	Width	identification	Amphibole	c	NAM	Sketch/Comments	Sketch	Photo	EDS
A	65/3	M											·	
	F5-3	100												
	ES/3	MD		Pres	A: =	759	rntac	+ 5-1	0 %	deh	ers			
	C4-6	MΔ		P	20B	Levi	C. inta	ct 5-	10%	Sol	279			
	B4-6	70												
B	1-13-6	M					O^{-1}							
	636	ND					X							
	F3-6	NV												
	B4.6													
	A4.6	\sim								i				

Reservoirs Environmental, 1nc. TEM Asbestos Strueture Count

Laboratory name:	REt
Instrument	JEOL 100 CX NS
Voltaae (KV)	100 KV
Magnification	€0Ø(10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary fitter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client ;	ReR
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	963
Oate received by lab	6/29/12
Lab Job Number:	239030
Lab Sample Number:	889257

F-Factor Calculation (Indirect Preps Only):						
Fraction of primary filter used						
Total Resuspension Volume (mi)						
Volume Applied to secondary filter (ml)						

Analyzed by	AH
Analysis date	6/29/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	ת
Counting rules (ISO, AHERA, ASTM)	Alon
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure	No. of Str	nctures	Dime	nsions	Identification	Mmeral Class				1 = y	es, blank	= no
Ond	Ond Opening	Type	Primary	Total	Length	Width	identinoanon	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS
A	Eby	M				·								
	C6-4	ND							·					
	Ble-4	Δ		0,	2, A:	809	in ter	± 5%	de	٥٥				
	A6-4	ND		၉	en B	70	ginto	act 5	9-8	eb.	5			
B	H34	ND			. 6									
	63-4	ND							1					
	F34	ND							A					
	E34	ND												
								7						

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N(S)
Voltage (KV)	100 KV
Magnification	EORX 10KX
Grid openina area (mm2)	0.01
Scale: 1L=	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

7	1010 000111
Client:	ReR
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	966
Date received by lab	6/29/12
Lab Job Number:	239030
Lab Sample Number:	889258

Analyzed by	AH
Analysis date	6/29/12
Melhod (D=Oirect, t=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alon
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):				
Fraction of primary filter used				
Total Resuspension Volums (ml)				
Voturne Applied to secondary filter (ms)				

Gr	rid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Identificatkm	Mineral Class				1 = yes, blank = no				
		Grid Operarig	Туре	Primary	Total	Length	Width	ICC MILCOLATI	Amphibole	Amphibole C		Sketch/Comments	Sketch	Photo	EDS		
	A	H5,4	ND				<u> </u>) 						
		65-4	ND														
		F5-4	MO		β. g	A=	75.8	intac	x 7%	del	7						
		ESH	ND		Peo		Prec										
	B	H5-10	M														
		(55b	ND						<u> </u>		·						
		F56	an					X									
		ES6	M					7.0									
	, .		•														

Reservoirs Environmental, Inc. TEM Asbestos Strueture Count

Laboratory name:	REI
Instrument	JEOL 100 CX NS
Voltaae (KV)	100 KV
Magnification	€ 0 6 0€ 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	ReR
Sample Type (A=Alr, D=Dust):	A
Air volume (L) or dust area (cm2)	966
Date received by lab	6/29/12
Lab Job Number:	239030
Lab Sample Number:	889259

F-Factor Calculation (Indirect Preps	Only):	
Fraction of primary filtsr used		,
Total Resuspension Volume (ml)		
Volume Applied to secondary filter (ml)		

· · · · · · · · · · · · · · · · · · ·	
Analyzed by	AH
Analysis date	16/29/12
Method (D=Direct, i=Indirect, IA=Indirect, ashed)	D .
Counting rules (ISO, AHERA, ASTM)	Alon
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Identification	Mineral Class				1 = yes, blank = no				
Ond	Ond Opening	Туре	Primary	Total	Lenaltı	Width	Identification	Amphibole	С	NAM	Skeich/Commenis	Sketch	Photo	EDS		
A	1-10-1	Δ			,											
	66-1	MD														
	Fle-	7		Pre	cA:	90%	intac	t 5-	7%	le6	~S					
	Ele-1	ND		\sim	<u> عی</u>	80%	intact	- 5-	79.	Veb.	S					
B	64.3	ND														
	F4-3	$\Delta \Delta$														
	E4-3	$\nabla \nabla$			1											
	04-3	7						· · · · · · · · · · · · · · · · · · ·								
					7)										

Analytical Procedures - AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5

micron with an aspect ratio of 5:1 or greater with substantially parallel

sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement,

with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are

intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or

hidden by a particulate. The exposed fiber end must meet the fiber

definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

Area Analyzed, mm² = # GO counted x Average GO Area (mm)

Concentration, $s/cc = \frac{\text{\# Asbestos Structures}}{\text{\# GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2)}{\text{Average GO area (mm}^2)} \times \frac{1L}{1000cc}$

Filter loading, s/mm² = # Asbestos structures Area Analyzed (mm²)

GO = TEM grid opening



July 2, 2012

Laboratory Code:

RES

Subcontract Number: Laboratory Report: NA

Project # / P.O. #

RES 239099-1 None Given

Project Description:

3rd West Sub - RMP

David Roskelley R & R Environmental 47 West 9000 South #2 Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 239099-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely.

Jeanne Spencer

President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE 1. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:

RES 239099-1

Client:

R & R Environmental

Client Project Number / P.O.:

None Given

Client Project Description: Date Samples Received:

3rd West Sub - RMP

June 29, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

July 2, 2012

Client	Lab		Area	Air	Number of	Analytical	Asbestos	Filter
ID Number	ID Ni	umber	Analyzed	Volume Sampled	Asbestos Structures Detected	Sensitivity	Concentration	Loading
			(mm²)	(L)		(s/cc)	(s/cc)	(s/mm²)
3W-062712 E	· EM	889485	0.0900	938	ND	0.0046	BAS	BAS
3W-062712 N	EM	889486	0.0900	936	ND	0.0046	BAS	BAS
3W-062712 W	EM	88948 7	0.0900	936	ND	0.0046	BAS	BAS
3W-062712 S	EM	889488	0.0900	934	1	0.0046	0.0046	11.1

NA = Not Analyzed

Filter Material = Mixed Cellulose Ester

ND = None Detected

Filter Diameter = 25 mm

BAS = Below Analytical Sensitivity Average Grid Opening in mm² = 0.010 Effective Filter Area = 385 sq mm

DATA QA

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0215

TABLE II. SUMMARY OF ANALYTICAL DATA

RES Job Number:

RES 239099-1

Client

R & R Environmental

Client Project Number / P.O.:

. . .

Client Project Description:

None Given 3rd West Sub - RMP

Date Samples Received:

June 29, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

July 2, 2012

Client ID Number	Lab ID Nu	ımber	Astiestos Mineral			Structures >5 Microns	**Excluded Structures	Asbestos Structures			
				As	bestos Str	ucture Typ	oes*	in Length		for	
				Fibers	Bundles	Clusters	Matrices	_		Concentration	
3W-062712 E	EM	889485	ND	0	. 0	0	0	0		0	
3W-062712 N	EM	88 9 486	ND	0	0	0	0	0	0	0	
3W-062712 W	EM	88 9 487	ND	0	0	0	0	0	0	0	
3W-062712 S	EM	889488	Chrvsotile	1	0	0	0	0	0	1	

^{*}See Analytical Procedure for definitions

^{**}C = Excluded from total due to lack of confirmation

^{**}L = Excluded from total for length less than 0.5 micron (AHERA only)

^{**}A = Excluded from total due to i ncorrect as pect ratio

ND = None Detected

Due Date: 10-30' (Z Due Time: 530c

Sao I Ugan St. Oarnnr, CO 80216 • Ph; 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV Pager : 303-809-2093

RES 239099

				INVO	ICE TO: (IF	DIF	FERE	ENT)										C(ONTAC	T IN	FOR	MA	TION:				
Company: (!R Environmen	KI.		mpany:						[_	ntact:	Pay	2	وم	æll	И					Conte		10	ンナンハ			
Address: L	17 W 90003	#2	Add	dress:							ono:										Phone	T:					
	Sandy W. 84	570								Fa											Fax:		80	1 82	8 (217	
											Vpace		. 14.								Ce#/p	ager:					
	er and/or P.O.#: ption/Location: 3 12 16	lest Sub-RMe										a Delive			•	,	හ	<u>~</u>						<u> </u>			
ASBEST	OS LABORATORY H	OURS: Weekdays: 7am	- 7pm	··		Т				REQU	EST	ED A	NAI	LYS	s					VAL	ID M	IATI	RIX CC	DES	L	B NOTE	S:
PLM / PCI		SH (Same Day) PRIORIT		STANDAR	D	Γ						П		Т	П	\top				Air =	Α	\Box	В	ulk = B			
		(Rush PCM = 2hr, TEM				1	l	1		1			1						<u> </u>	ust =		\dashv	Pa	aint = P	<u> </u>		
		IOURS: Weekdays: Sam				4														ioil =		\bot		ipe = W	<u> </u>		
Metal(S) /		RUSH24 hr	3-5 Day	**Prior notifica	ation ts	1	Ę,							اء						ab =		\dashv		= Food_	 		
RCRA 8 /	Metals & Welding	RUSH 5 day		required far i	RUSH	Ĭ	å "			Scan				윮	П		<u>s</u>	,	Drinkin) Wa				Water = WW	 		
Organics	III/ TOLP	24 hr 3 day 6	6 Day	turnaround	is,**	Point Count	÷ g	III		S	1]]	爱			E G	1	MAST	MEI) = O		media only**	 		
MICRORI	IOLOGY LABORATO	RY HOURS: Weekdays:	9am - 6pm			4 .	8 8			Metals		1	1 1	ð	§	§ .	Quantification			1	102 0,	ADION.	od mpe	Theolia Orny			
E.coll O15	7:H7, Coliforms, S.aure	eus 24 hr.		3-5 Day		Long report,	7402, 30-Indir				1		Н	ۇ ئۇ	gi.			•	1						ļ		
1	a, Listeria, E.cou, APC,				•	e G	1 8 8	OSHA	릙	yte(s) Welding Fume,				취	Ē		identification,		l								
Mold			24 Hr48 I	Hr3 Day	5 Day	3	Levef II, 0-vec, IS	g	Ē	န္ ရန္		*	1	팀	8	5 8			l					}			
**Turnarou	nd times establish a laborate	ory priority, subject to laboratory v	voluma and ara no	t guaranteed: /	Additional tees	듗		7400B,	Respirable	Analyte(s)	ᇤ	¥ Ë	L	ပ္တိုင္ငံ	4	ة اع			g.								
. :	<u> </u>	bly for afterhours, weekemis and i	rolidays.**			ā	AHERA, lant, Micr	7400A.	룡	- Analy TCLP,	Σ	onella: +/-	🛊 🤅	E +	92	اٍ ٰ			支	و ا	20					: .	
	structions:					M - Sho	• 🗗		DUST - Total,	METALS - RCRA 8, TI	ORGANICS - METH	Salmonella: E.coll 0157:	Listerla:	Aerobic E.cofr	Coliforms	Y & M:	Mold +/		mple Vc	Matrix Code	# Containers		ate lected	Time Collected	EM Nu	mbe r (Le Use Only)	
Clients	ample ID number	(Sample ID's mus	ıt be u niq ue)			PLM	Semi	夏	3	불운	ő		MIC	ROBI	OLOC	ŊΥ	9		34	2	*		Vdd/yy	htv/mm a/p		45 49	·
	-06412E														П		9		627	A		6/2	Huz		88	348	<
2 3W-	062712 N								·		:				. :				936							. • -	6
3 34.	062712 W						1						11						936	Ш		- {			1	8	7
	XIIII S		,				1			:								_	934	J		J	,			85	
5																											
6											П			1		П	7					Ŧ.		. :			
7						Π		Π	I				П	7			Т										
8						П												. :									
9											П	7		T													
10													T	1													
NOTE: R	samples received: El will analyze incoming sanipk as indicated on this Chain of Cu	based (pon information received as stody shall constitute an analytical ser	nd will not be respon	samples shall estate for errors o th payment terms	r cmisalona in ca	lculati	ions resu	ulting fr	rem th	e Inacci	racy o	odgin ay tesu	al data	a Bys	igning month	dient/	compe est su	ny rep	fesenladv	agre	es that	subm	ission of t	the following sar	nples for re	quested	
Relingui	shed By:	- 12 -	Fo.	150				Data	/Ti~	ie: 6	17.8	112							500	nole	Cond	ition		In Ice S	ealed	Jalact	
	ory Use OxNy /		- Date/Tin	ne:	2- حا	، كرد				Canlei				_ ص	€ ‡Ξ	<u>-2</u>			_	npie np. (I		iaon;			es / No	Yes	_l lo
Results:	Contact	Phone Email Fax	Date	Time	Initia	als	Co	ntact				Phone	En	nail f	àa_		-		Dale *	7	213		Time	·(22se) initia	als	₹
	Contact	Phone Email Fax	Oate	Time	Initia	ats	_ co	ntact				Phone	En	ail f	ax				Date				Time	9	Initia	als 📗	

Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type A = Amosite An = Anthophyllite C = Chrysotile Cr = Crocidolite Structure Types F = Fiber B = Bundle C = Cluster M = Matrix

M = other structure associated with a matrix

NAM = Non Asbestos Mineral

XGB = partly obscured by a grid bar

= no structures detected

Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

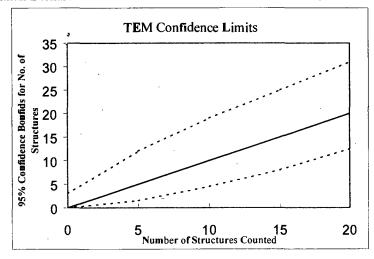
TEM Analysts

Jeanne S. Orr Nathan DelHierro Angela Heitger Jonathan Bernard

= Tremolite

ND

Paul D. LoScalzo Mark Steiner Norberto Zimbleman Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc. TEM Asbestos Strueture Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S
Voltage (KV)	100 KV
Magnification	(20KX 10KX
Grid openina area (mm2)	0.01
Scale: 1L ≈	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Fitter Area (mm2)	
QA Type	

R+R
A
938
6/29/12
239099
88948

Analyzed by	AH
Analysis date	7/2/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	0
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps	Only):
Fraction of primary filtsr usad	
Total Resuspension Volume (ml)	
Voluma Applied to secondary filter (ml)	

Grid	Grid Opening	Structure	No. of Str	uctures	Dimensions		Dimensions		Dimensions Identification Mineral Class					1 = yes, blank = no		
Ond	Ond Opening	Туре	Primary	Total	Length	Width		Amohiboie	С	NAM	Sketch/Comments	Sketch	Photo	EDS		
A	145-4	$N\overline{V}$														
	65-4	ND			,) 								
	F5.4	1		Pie	A:	809	vintac	5-7	1/20	leb	S					
	ESH	M		Pie	oB	~Pre	A.									
	C5-4	NO														
B	63.6	12					·									
	F3-6	4				\mathcal{I}										
	E36	7														
	C3-6	2														
							·									

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	(20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L=	0.28 um
Scale: 1D=	0.066 um_
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	_
QA Type	

Client:	R+R
Sample Tyoe (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	936
Date received by lab	6/2a/12
Lab Job Number:	239099
Lab Sample Number:	88948

Analyzed by	AH
Analysis date	7/2/12
Method (D=Direct, I=indirect, IA=indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahea
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

 F-Factor Calculation (Indirect Preps C	only):
Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary fitter (mi)	

Grid	Grid Grid Opening		No. of Str	Structures D		nsions	Identification	Mineral Class			1 = yes, blank = no			
Cito	Cité Operang	Туре	Primary	Total	Length	Width	Toongoadon	Amphibole	c	NAM	IAM Sketch/Cornments	Sketch	Photo	EOS
A	F5.4	$\Delta \Delta$												
	E5-4	ND						,						
	C5-4	ND		Prec	A: 7	0907	tect	5-7%	deb	2.5				
	B5-4	77		Prep	Bil	20 %	intact	5-79		I				
	A5-4	ND		1								-		
3	L4-1	MD		ì	-		:							
	144	MD						·						
	H4-($M_{\mathcal{O}}$		·		A		,						•
	636	MD			·									

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S
Voltage (KV)	100 KV
Magnification	(20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample,Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	936
Date received by lab	6/29/12
Lab Job Number:	239099
Lab Sample Number:	ନ୍ଧ୍ୟେ ୧୯

Analyzed by	AH
Analysis date	7/2/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grkl storage location	Month Analyzed
Scope Aitgnment	Date Analyzed

F-Factor Calculation (Indirect Preps O	niy):
Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Identification	·Mineral Class			,	1 = y	es, blank	= no
Gna	Gnd Opening	Туре	Primary	Total	Length	Width	identification	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS
A	H3-4	CM			,									
	634	NO					·			·				
	F34	ND		P.	2. A:	809	intace	5-7	4. Se	brs				
	E3-4	\sim D		Pre	B/	Prec	\mathcal{A}							
	C3-4	M												
B	63-1	M		•	·		·							
	F3-1	DV		,		P								
	E3-1	ND			A			•						
	(3-1	$\nabla \mathcal{O}$			/ 🔾									

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

	2
Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	(20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

K+R
A
934
6/29/12
239099
88948

Analyzed by	AH
Analysis date	7/2/12
Method (D=Direct, I=Indirect, IA=IndirecL ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps	Only):
Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (mi)	

Grid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Identification	Mineral Class				1 = y	es, blank	= no
Ond	Che Opening	Туре	Primary	Total	Length	Width	10011411001011	Amphibole	С	NÀM	Sketch/Comments	Sketch	Photo	EDS
A	H5-1	M			'									
	65-1	ND		Pier	A: 8	30%	intau	5-7	4.20	605		·		
	F5-1	F		1	2	l	. 40							
•	E5-	∇D		Pies	Br	Pieci	1							
	C5-1	V0												
B	£3-3	ND				9	()				•			
	c3.3	ND					8							
	83-3	ND						-			·			
	B3-1	N			·									

Analytical Procedures - AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5

micron with an aspect ratio of 5:1 or greater with substantially parallel

sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement,

with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are

intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or

hidden by a particulate. The exposed fiber end must meet the fiber

definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol nuethods are not accredited by NVLAP

Equations Used for Calculations

Area Analyzed, mm² = # GO counted x Average GO Area (mm)

Concentration, s/cc = $\frac{\text{\# Asbestos Structures}}{\text{\# GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2)}{\text{Average GO area (mm}^2)} \times \frac{1L}{1000cc}$

Filter loading, s/mm² = # Asbestos structures Area Analyzed (mm²)

GO = TEM grid opening



June 30, 2012

Laboratory Code:

RES

Subcontract Number:

NA

Laboratory Report: Project # / P.O. #

RES 239101-1 None Given

Project Description:

3rd West Sub - RMP

David Roskelley R & R Environmental 47 West 9000 South #2 Sandy UT 84070

Dear Customer.

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient In both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 239101-1 Is the job number assigned to this study. This report Is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described In this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except In full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer

President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:

RES 239101-1

Client:

R & R Environmental

Client Project Number / P.O.:

None Given

Client Project Description:

3rd West Sub - RMP

Date Samples Received:

June 29, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

June 30, 2012

Client	Lab		Area	Air	Number of	Analytical	Asbestos	Filter
ID Number	ID No	umber	Analyzed	Volume Sampled	Asbestos Structures Detected	Sensitivity	Concentration .	Loading
			(mm²)	(L)		(s/cc)	(s/cc)	(s/mm²)
3W-062812 E	EM	889497	0.0900	923	·ND	0.0046	BAS	BAS
3W-062812 N	EM	889498	ND	923	NA	Samp	ole can not be Prepare	ed .
3W-062812 W	EM	889499	0.0900	923	ND	0.0046	BAS	BAS
3W-062812 S	EM	889500	0.0900	923	ND	0.0046	BAS	BAS

NA = Not Analyzed

Filter Material = Mixed Cellulose Ester

ND = None Detected

Filter Diameter = 25 mm

BAS = Below Analytical Sensitivity
Average Grid Opening in mm² = 0.010

Effective Filter Area = 385 sq mm

DATA QA

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE II. SUMMARY OF ANALYTICAL DATA

RES Job Number:

RES 239101-1

Client:

R & R Environmental

None Given

Client Project Number / P.O.: Client Project Description:

3rd West Sub - RMP

Date Samples Received:

June 29, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

June 30, 2012

Client ID Number	Lab ID N u	ımber	Asbestos Mineral	Asl	bestos Str	ucture Tyj	pes*	Structures >5 Microns in Length	**Excluded Structures	Asbestos Structures for
			-	Fibers	Bundles	Clusters	Matrices		,	Concentration
3W-062812 E	EM	889497	ND	0	0	0	0	0	0	0
3W-062812 N	. EM	889498	NA							
3W-062812 W	EM	889499	ND	0	0	0	0	0	0	0
3W-062812 S	EM	889500	ND	0	0	0	0	0	0	. 0

^{*}See Analytical Procedure for definitions

ND = None Detected

^{**}C = Excluded from total due to lack of confirmation

^{**}L = Excluded from total for length less than 0.5 micron (AHERA only)

^{**}A = Excluded from total due to incorrect as pect ratio

Due Date: Le · 30° 2 Due Time: 530c

RES 239101

7937 2254 8308

REILAB RESERVITES ENVIRONMENTS, INC. 9601 Logan St. Denver, CO 80316 · Ph; 303 884-1385 · Fax 303-477-4275 · Toll Free :866 RESI-ENV Pager : 303-609-3098

	INVOICE TO: (IF	DIFFE	RENT))		_			_		C	ONTAC	T IN	FOR	MATIC	N:				
Company: R& Environmental	Company:				Cont	Va	ve	Res	cell	W				Conta	ct.					
Address: 47 W 90005 152	Address:				Phor					, -				Phone	a:					
Sandy, W- 84070					Fex:			···						Fax:						
	<u></u>								<u> – lo</u>	<u>35</u>				Ce4/p	agar:					
Project Number acolor P.O. #:					- Fina	Data Deliv														
Project Description Location: 3 DS West Sub - RIMP			_			<u> </u>	<i>بد</i> (<u>ਦ, ਨ</u>	rem	ስሃር	con	<u> </u>								
ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm			: .	R	EQUE	STED	ANAI	LYSIS	3		•		VAI	JD W	IATRIX	CODES		LA	B NOTE	s:
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(Rush PCM = 2hr, TEH = 8hr.)	*****		. [1 1		-	+	11	-		1)ust			Paint = P				
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - Spm					11			11	11				Soll =		-	Wipe = W				
Metal(s) / Dust RUSH 24 hr 3-5 Day	**Prior notification is					[[ا اے	-1-1					SW		F = Food				
RCRA 8 / Metals & WeldingRUSH S day10 day	rsquired fer RUSH	हुं व	ار		8			8	11	ğ	S	Drinkin	g Wa			ste Water =	w I		•	
Organics 24 hr 3 day 5 Day	turnarounds.**	Point Count	e e	11	SS S	1 (123	100	***	M E1		Olhe	wipe media on	alvee			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm			ğ		Metals Scan			3	ទ្ធ ទ្ធ	ھ اے	ž	<u> </u>	1	1 1	ургочец ч	TIPO I I BOJO OI	"'			
	3-5 Day	Lang report,	. 🥱 l	-				* 출		ع اج ع اج	INITIALS OR OTHER						1			
Salmonella, Listeria, E.coli, APC, Y & M 48 Hr3-3 Day		5 P	ISO-fr OSHA	8	Analyte(s) TCLP, Welding Fume,		:	취실	Quantific		Š			l [ļ	t			
	48 Hr3 Day5 Day	or, Lan		Respirable	(를)	1	-) [1	- 1291	ठ ठ	중 별	8			1 1			[
**Turnaround times establish a laboratory priority, subject to laboratory volume and are	e not guaranteed. Additional fees			8	¥ ¥	28 - METH onella: +/-		8 8	: ÷	۶ <u>۾</u>	₹ E	9		H						
apply for afterhours, weekends and holidays.**		Short report.	7400A,	Total	통원	- S S S S S S S S S S S S S S S S S S S	* 8	<u> </u>	ا بن ا عن	± ±	N.S.	<u>§</u>	1 8	5			Г			
Special Instructions:		Short rep	투 5	۱۴۱	ا ج ج	Salmonella: +/-	Listeria:	g igi	E 8	ž j	2	Sample Volume (L) / Area	88	# Containers	Date		. //		mber (Lat	oratory
			Ÿ '	DUST	WETALS RCRA 8,			1 S		× 20 ×	를	ğζ	Matrix	통	Collect	•	I .		Jse Only)	
Client sample ID number (Sample ID's must be unique)		PLM	Semi-	2	S E	<u>۳</u> ا	MICE	ROBIO	LOOY		\$		Σğ		mm/dd/	yy hh/mm		<u> </u>		
1 3W-062812 E		0	4					$\perp \downarrow$				923	A		61281	12		880	749	7
2 3W-062812 N										上		923				1 2 2 2 2	·			8
3 3W 062812 W												923	\coprod						9	9
4 3w-062812 S												923	1						50	0
5				П			П	П		Τ-					_					
6		\top					П	\Box		T							\Box	:		
7								\sqcap		\top			T							
8		. /	1						\sqcap	\top										
9								П	77								\top	-		
10						7	\prod	11	11	1	: .		-	7			\neg			
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NOTE: REI will analyze incoming samptide based upon information received and will not be re-	sponsible for eners or omissions in ca	culations	gnitluser	from the									e ágse	as that	submissio	n of the followi	ing sam:	ples for rec	Q ueste d	
analysis as Indit ated on this Chain of Custo3y shall constitute an analytical services agreemen	- 1	, tajlure to	comply v	vith payr	ment tem	ns may res	uitna	1.5% m	onthiy ir	16/65	sun;harg	e.								
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Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

Structure Types

Α	=	Amosite	F =	Fiber
An	=	Anthophyllite	B =	Bundle
C	=	Chrysotile	C =	Cluster
Cr	=	Crocidolite	M =	Matrix
T	=	Tremolite		

ND = no structures detected

M = other structure associated with a matrix

NAM = Non Asbestos Mineral

XGB = partly obscured by a grid bar

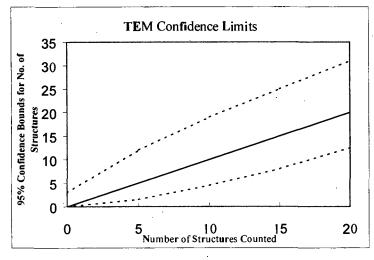
Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron 1.80 length units = 0.5 micron 18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr Nathan DelHierro Angela Heitger Jonathan Bernard Paul D. LoScalzo Mark Ŝteiner Norberto Zimbleman Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc. TEM Asbestos Strueture Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L=	0,28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	Rate
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	923
Oate received by lab	6/29/12
Lab Job Number:	239101
Lab Sample Number:	889497

Analyzed by	JR
Analysis date	6/20/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	151
Counting rules (ISO, AHERA, ASTM)	AH
Grld storage location	Moniii Analyzed
Scope Alignment	Date Analyzed

F-Factor Cateulation (Indirect Preps C	Only):					
Fraction of primary filter used						
Total Resuspension Volume (ml)						
Volume Applied to secondary filter (mt)						

Grid	Grid Opening	Structure	No. of Str	uctures	Dimensions		Identification	Mineral Class			1 = y	es, blank	= no	
Ond	Grid Opening	Туре	Primary	Total	Length	Width	identineation	AmpNbote	С	NAM	Sketcti/Comments	Sketch	Photo	EDS
A	615-6	ND												
	F5-6	NO			Vn	3		70 frent	in f	16%	delors			
	E5-6	ND			Co	o T	> &	Ochern fr	nt	10	he debos			
	15-6	M			, ,			,						
	B5-6	MD							B	6/30	1/12			
\bigcirc	693-4	ND												
	F3-4	J												
	E3-4	ND										·		
	C3-4	NO												
						,								

Reservoirs Environmental, Inc. TEM Asbestoa Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
Voltace (ICV)	100 KV
Magnifieation	(20K) 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :		RH	2
Sample Type (A=Air, D=Oust):		A	
Air volume (L) or dust area (cm2)	-	72	3
Data received by lab	6	29	12
Lab Job Number.	2	39	101
1.ab Sampte Number:	8	89	498

	<u> </u>
Analyzed by	K
Anatysis date	6/20/12
Method (D=Oirect, i=Indirect, tA=Indirect, ashed)	101
Counting mies (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Oate Analyzed

r-Factor Cakallation (Indirect Preps (Only):	
Fraction of primary filter used		
Total Resuspension Volume (ml)		,
Volume Applied to secondary filter (ml)		

Grid	Grid Opening	Structure			Dimensions		Structures Dimensions		Identification	Mineral Class			1 = y	es, blank	= no
. Gra	Grid Opening	Туре	Primary	Total	Length	Width	Identification	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS	
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Reservoirs	Environmentai, inc.
TEM Asbea	tos Strueture Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
∨oltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 10 =	0.058 um
Primary filter area (mm2)	385
Secondary Fitter Area (mm2)	
QA Type	

Client :	RAR
Sample Type (A=Air, D=Dust);	A
Air volume (L) or dust area (cm2)	923
Date received by lab	6/29/2
Leb Job Ntanber:	239101
Lab Sample Number:	889 499

Analyzed by	TR
Analysis date	6/20/12
Method (D=Direct, l=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):					
Frection of primary filter used					
Total Resuspension Volume (mi)					
Volume Applied to Secondary filter (ml)					

	Grid	Grid Opening	Structure	No. of Str	nctures	Oime	nsions	Identification Mineral Class					1 = ye	= no	
L	· · · · ·	Ond Optiming	Туре	Primary	Total	Length	Width	Identification	Amphibola	С	NAM	Sketch/Comments	Sketch	Photo	EDS
	A	K5-3	ND			· .									
		H5.3	ND				Page	A	60 /min 6	wt	5-	10% de la			
Ŀ		615-3	NO				2,) /3 8	30 %m/2	vt	5-1	O'bo Jehn)		
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Reservotrs Environmental, Inc. TEM Asbostos Structure Count

Laboratory name:	REI
instmment	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.01
Scate: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	386
Secondary Filter Area (mm2)	
QA Tyoe	

	(cet	K
	A	
4	12'	3
6	129	12
8	89.	500
		A 92° 6/29 239

Analysis dale	6	20	12
Method (D=Direct, I≃Indirect, IA≖tndirect, ashed)	· ¬	0	
Counting mles (ISO, AHERA, ASTM)		AH	
Grid storage location	Mon	th An	alyzed
Scope Alignment	Dat	e An	alyzed

Analyzed by

Fraction of primary filter used	
Total Resuspension Volume (mi)	
Volume Applied to Secondary filter (ml)	

Grid	Grid Opening	Stmcture	No. of Str	uctures	Dimer	nsions	(dentification	Mineral Class	Mineral Class			1 = yes, blank = no			
	Ond Opening	Туре	Primary	Total	Length	Width		Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS	
1	H44	M										· L			
	64-4	MD			(-) Sp. /	A-80	frem (n	6	5-10	/ defores	,			
	F4-4	M			Pu	1	5 80	% infut	<u> </u>	5-10.					
	04-4	MD									/				
	C4-4	20						-	47	0/30	4				
13	E4-6	1				-		/	77						
	C4-6	2									. •				
	13470	M		,											
	A4-4	\mathcal{M}													

Analytical Procedures - AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5

micron with an aspect ratio of 5:1 or greater with substantially parallel

sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement,

with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are

intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or

hidden by a particulate. The exposed fiber end must meet the fiber

definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Eauations Used for Calculations

Area Analyzed, mm² = # GO counted x Average GO Area (mm_x)

Concentration, s/cc = $\frac{\text{\# Asbestos Structures}}{\text{\# GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2)}{\text{Average GO area (mm}^2)} \times \frac{1L}{1000cc}$

Filter loading, s/mm² = # Asbestos structures Area Analyzed (mm²)

GO = TEM grid opening



July 3, 2012

Laboratory Code:

RES NA

Subcontract Number: Laboratory Report:

RES 239253-1

Project # / P.O. #

None Given

Project Description:

3rd West Sub - RMP

David Roskelley R & R Environmental 47 West 9000 South #2 Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 239253-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer

President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:

RES 239253-1

Client:

R & R Environmental

Client Project Number / P.O.:

None Given

Client Project Description:

3rd West Sub - RMP

Date Samples Received:

July 2, 2012

Analysis Type:

TEM, AHERA

Turnaround:

24 Hour

Date Samples Analyzed:

24 Hour July 2, 2012

Client Lab			Area	Air	Number of	Analytical	Asbestos	Filter
ID Number	ID N	umber	Analyzed	Volume Sampled	Asbestos Structures Detected	Sensitivity	Concentration	Load ing
			(mm²)	(L)		(s/cc)	(s/cc)	(s/mm²)
3W-062912 E	EM	890021	0.1000	388	ND	0.0099	BAS	BAS
3W-062912 N	EM	890022	0.1000	295	ND	0.0131	BAS	BAS
3W-062912 W	EM	890023	0.1000	388	ND	0.0099	BAS	BAS
3W-062912 S	EM	890024	0.1000	388	ND	0.0099	BAS	BAS

NA = Not Analyzed

Filter Material = Mixed Cellulose Ester

ND = None Detected

Filter Diameter = 25 mm

BAS = Below Analytical Sensitivity
Average Grid Opening in mm² = 0.010

Effective Filter Area = 385 sq mm

DATA QA

P. 303-964-1966 F: 303-477-4275 5801 Logan Street, Suite 100 Danver, CO 80216

1-866-RE SI-ENV www.reileb.com

RES 239253

				INVOICE TO: (IF	DIFF	EREN	IT)								CON	TAC	T INF	ORN	IATION:			
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	andy Ut 8	34070						Fa	-							Fax:						
O-1	r anti/or P.O. #:		L						V/paga	Deliver	7 50			5		Calt/pagar:						
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Project Descrip		West Sub-RMP								reve	&	re	1411	اوري	<u>~</u>					···	·····	لـــــــــــــــــــــــــــــــــــــ
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PLM / PCN	I/(EM)	RUSH (Same Day) 🗶 PRIORIT	Y (Next Day)S	TANDARD	П												\ir = .	A	E	Bulk = B		
	·	(Rush PCM = 2hr, TEN			1	1	1	11		11					L	D	ust =	D	P	aint = P		
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Metal(s) / [RUSH 24 hr		rior notification is		뚩	j				اءا				⊢		ab =			= Food		
RCRA 8 / N Fume Scar	Metals & Welding	RU\$H 5 day		quired for RUSH	팋	Ouant		8	$ \ $	11	죓	11		<u>چ</u>	10	rinking	Wat			Water = WW		
	n/ ICLP	24 hr 3 day		tumarounds.**	ၓၙ	Pag +	ŀ	8			į			antification	-	***	10 54	O = Other E1792 approved wipe media only**				
Organics	OLOGYLABOR	ATORY HOURS: Weekdays:			2	18 SO		Metals Scan			3	ě	<u>5</u> _	E S	⊢	A511	WI E 1/	9Z app	roved wipe	media Only**		
_	7:H7, Coliforms, S		2 Day3-		Long report, Paint Count	. R I	4	9			চ	8 B	ation at	94. Identification, Quantification in Interest Sinitials or Other Notes								
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	d three establish a lai	bbratory priority, subject to laboratory				ا ۾ ڪ	7400B, OS Respirable	\$ 48 %	F	\$ E	3		8 6			a						
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					1 •	- 불		A S.	3	Salmoneila: +/- E.coli O157:H7:	5 S	E.coli: +/- Coliforms:	S.aureu Y.&.M.		·	A A	ž	Containers	Date	Time	Use O	
Client sa	mple ID numb	er (Sample ID's mus	st tie unique)		2	YEM - AHE Semi-quant,	PCM .	METALS - Analyte(s) RORA 8, TCLP, Welding Fume,	ORGANICS - METH		AICROI			NAS.		(L) / Area	Matrix Code	3 4	nun/ddgy	Collected hh/mm a/p		
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9					\Box					\Box	11	\Box	T	\top			\neg		····	<u> </u>		
10													1		1							
Number of a	samples received:	1_4)	(Additional sam	nples shall be listed on	attach	ed long	g form.)							<u> </u>			لــــن			· · ·	
NOTE: Ri analysis a	El will snalyze incoming is indicated on this Chair	samples based upor information received e	nd will not be responsible	e for errors or ontissions in ca syment terms of NET 30 days	alculation s. fadium	ns rasulti	ing from	the Inaccu ayment ta	iracy o	f original ay result	data. B in a 1.5	y signin % moni	g client hily inte	oompany	repres	en tative	agree	s that s	jbmission of	the following sar	nples for requeate	đ
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Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

Structure Types

Α	=	Amosite	F =	Fiber
An	=	Anthophyllite	$\mathbf{B} =$	Bundle
C	=	Chrysotile	C =	Cluster
Cr	=	Crocidolite	. M =	Matrix
Т	=	Tremolite		

ND = no structures detected

M = other structure associated with a matrix

NAM = Non Asbestos Mineral

XGB = partly obscured by a grid bar

Sizing Conversion

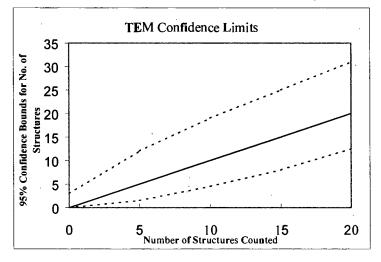
1 length unit = 5 mm on screen = 0.278 micron 1.80 length units = 0.5 micron 18.0 length units = 5 microns

.

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr Nathan DelHierro Angela Heitger Jonathan Bernard Paul D. LoScalzo Mark Steiner Norberto Zimbleman Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoire Environmental, Inc. TEM Asbestos Structure Count

1	
Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid openina area (mm2)	0.01
Scale: 1L=	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	,

Client :	Rak
Samole Tyoe (A=Air, D=Dust):	A
Air yolume (L) or dust area (cm2)	385
Oate received by lab	7/2/12
Lab Job Number:	239253
Lab Sample Number:	890021

Analyzed by	JB
Analysis date	7/2/12
Method (D=Direct, I=Indirect, IA=Iridirect, ashed)	5
Counting rules (ISO, AHERA, ASTM)	AH
Grid storaae location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps	Only):
Fraction of primary filter used	
Total Resuspension Volume (ml)	·
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure	No. of Str	mctures	Dimensions		Dimensions		Identification	Mineral Class				1 = yes, blank = no			
Olid	Ond Opening	Туре	Primary	Total	Lenath	Width	- Identinoation	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS			
A	F3-4	ND															
	E3-4	ND			Pu		- 7c	Theirha	1	10%	Louis						
	C34	M			Pro	'了	60	Sun tur	f n	0/2	debus						
	33-4	M		-				`									
	E4-4	M															
3	HU-6	<i>N</i> 77															
	64-6	M						·				/					
	F4-6	M			,												
	54-6	M															
	C4-6	M															

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N (S)
Voltaae (KV)	100 KV
Magnification	(20KX) 10KX
Grid openina area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	Rak
Sample Tyoe (A=Air, D=Dust):	A
Air yolume (L) or dust area (cm2)	295
Date received by lab	7/2/12
Lab Job Numben	231253
Lab Sample Number:	890022

Analyzed by	JB
Analysis date	7/2/12
Method (D=Oireci, l=Indirect, IA=Indirect, ashed)	4
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps	Only):
Fraction of primary filter used	}
Total Resuspension Volume (mi)	
Voluma Applied to secondary filter (ml)	

Grid	Grid Opening	Structure	No. of Str	uctures	Dime	nsions	Identification	Mineral Class				1 = ye	s, blank	= no
Ond	Ond Opening	Туре	Primary	Total	Length	Width	- Identification	Amphibote	С	NAM	Sketch/Comments	Sketch	Photo	EDS
A	H4-6	N											_	
	64-6	D					A	D'a int	inf	3	-5% del	ws_		
	F4-6	ND			P	2	R 8	of int	1 /	3-	5% de bo	115		
	E4-6	M			<u></u>				1	2		,		
	C4-6	N							13	7/	2/12			
B	124-1	ND							1	7	7			·
	F4-1	N		·										
	E4-1	M)		·				7						
	c4-(M												
	E3-4	M					·							

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX (1)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid openina area (mm2)	0.01
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Tyoe	

R+R
A
388
7/2/12
231253
890023

Analyzed by	JB_
Analysis date	7/2/12
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	7/
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps	Only):
Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Strcture	No. of Str	ructures	Dime	nsions	Identification	Mineral Class		· · · · · · · · · · · · · · · · · · ·		1 = yes, blank = n		= no
Gild	Grid Operating	Туре	Primary	Total	Length	Width	ideritinication	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS
A	15-1	ND		·	·									
	K5-1	DN			P		-80	for hut		5%	Le bois			· ·
	145-1	M		·	Pa	5 1	~50	che in hut		50/	Lebus			
	65-1	M			, Y		-	``	4					
	F5-1	M				;		1	5 =	1/2/12	<u> </u>			
LB	F2-4	ND							,					
	EZ-4	M							•					
	E4-4	MD												
	Pote	M												
	15-1	Ŕ												

Reservoirs Environmental, Inc. TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.01
Scale: 1L=	0.28 um
Scale: 10 =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client:	Rak
Sample Type (A=Alr, D=Dust):	A
Air volume (L) or dust area (cm2)	38%
Date received by lab	7/2/12
1:ab Job Number:	231253
Lab Sample Number:	89002 H

Analyzed by	JB
Analysis date	7/2/12
Melhod (Q=Direct, I=Induect, IA=Indirect, ashed)	D
Counting rules (ISO, ANERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preos Only):							
Fractian of primary filter used	,						
Total Resuspension Volume (mi)							
Volume Applied to secondary filter (ml)							

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class				1 = yes, blank = 1		= no
Silu			Primary	Total	Length	Width	dentification	Amphibole	С	NAM	Sketch/Comments	Sketch	Photo	EDS
A	636	NO										,		
	F36	MO				29	- 80)	au hut	5	1/ Je	Sus			
	E3-6	M			Pu	PR	70	hunbuf	5	s/re of	Ebro			
	F4-6	ND					μ 		,	<i>/</i> ·				
	E4-6	M		`				115	7/	2/12		[
B	444	ND							//					
	(944	M												
,	F4-4	M)												
	195-4	MD					į							
	F5-4	MD												

Analytical Procedures - AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5

micron with an aspect ratio of 5:1 or greater with substantially parallel

sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement,

with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are

intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or

hidden by a particulate. The exposed fiber end must meet the fiber

definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

Area Analyzed, mm² = # GO counted x Average GO Area (mm)

Concentration, s/cc = $\frac{\text{\# Asbestos Structures}}{\text{\# GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2)}{\text{Average GO area (mm}^2)} \times \frac{1L}{1000\text{cc}}$

Filter loading, s/mm² = # Asbestos structures Area Analyzed (mm²)

GO = TEM grid opening